

1 Claims:

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3 1. A method of communicating information within a  
4 physical link layer of a packet based communication  
5 system, comprising the steps:

6 a) Employing a physical link layer  
7 transmitter to substitute an additional  
8 input data field within an idle data field  
9 of a data stream transmitted within the  
10 packet based communication system ; and  
11 b) Employing a physical link layer receiver  
12 to extract the additional input data field  
13 without corrupting information contained  
14 within the data stream.

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16 2. The method of claim 1 wherein the step of substituting  
17 an additional input data field within an idle data  
18 field comprises the steps:

19 a). Detecting one or more idle data field  
20 characters; and  
21 b) Replacing the one or more idle data field  
22 characters with one or more physical link  
23 layer data characters.

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25 3. The method of claim 2 wherein the one or more idle  
26 data field characters to be replaced are located  
27 within two or more of the idle data fields.

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29 4. The method of claim 2 or claim 3 wherein the step of  
30 extracting the additional input data field without  
31 corrupting information contained within the data  
32 stream comprises the steps of:

33 a) Detecting one or more physical link layer  
34 data characters; and



1       when the receiver detects one or more start data  
2       insertion multiplexer characters.

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4       10. A packet based communication system comprising one or  
5       more transmitters, one or more transmission media and  
6       one or more receivers wherein at least one of the one  
7       or more transmitters comprises a data insertion  
8       multiplexer for generating and inserting physical link  
9       layer data, and at least one of the one or more  
10      receivers comprises a data extraction de-multiplexer  
11      for detecting and extracting the physical link layer  
12      data.